retained the aggregate condition only in conservative organs and regions, or it is recalled in them by injuries. The general conclusion, therefore, on the basis of anatomy, is that Betulaceae are rightly "ranked in a low phylogenetic position."—J. M. C.

Hawaiian bogs.—Situated at or near the summits of high volcanic mountains, at altitudes of 1000–2000 m., with a precipitation reaching the enormous proportions of 20 m. annually, the summit bogs of Hawaii are among the most inaccessible and remarkable in the world. In a general description of these areas MACCAUGHEY[23] calls attention to the similarity of these bogs to those of other lands in general aspect and in the presence of similar mosses, sedges, and grasses. There is an absence of many familiar forms, however, such as pitcher plants, and many of the bog ericads and orchids; while other familiar genera take new and strange forms, as instanced by woody violets and lobelias. Many endemic forms occur, particularly among the dwarf trees that form clumps scattered over the tussocky surface.—GEO. D. FULLER.

Four-lobed mother cells.—Lobed spore mother cells are very conspicuous in Jungermanniales, and by most botanists are thought to be restricted to that order. The work of ALLEN[24] adds the Musci to the list. He finds that the spore mother cells of *Catharinea* show a distinct lobing, somewhat less than in representative Jungermanniales, but nevertheless very pronounced. Lobed mother cells are present in all of the 3 orders of the Hepaticae. CAVERS reports them in *Targionia*, one of the Marchantiales; they are almost universally present in the Jungermanniales; and the reviewer finds marked lobing in the spore mother cells of species of *Anthoceros* collected by him on volcanic islets in the South Seas. The lobing of spore mother cells in bryophytes is probably of phylogenetic significance, but until much more critical work has been done it is idle to theorize.—W. J. G. LAND.

Roesleria and Pilacre.—As a result of a comparison of the various forms of *Roesleria pallida* and *Pilacre Petersii*, BAYLISS-ELLIOTT and GROVE[25] conclude, from the great similarity in structure and habit of these two fungi, that both are forms of the same plant, and that *Pilacre Petersii*, long regarded as a primitive basidiomycete of the auriculariaceous type, is therefore nothing more than the conidial form of the ascomycete *Roesleria pallida*.—H. HASSELBRING.

---

[23] MACCAUGHEY, VAUGHAN, Vegetation of the Hawaiian summit bogs. Amer. Botanist **22**:45–52. 1916.

[24] ALLEN, CHARLES E., Four-lobed mother cells in *Catharinea*. Amer. Jour. Bot. **3**:456–460. *figs. 2*. 1916.

[25] BAYLISS-ELLIOTT, JESSIE S., and GROVE. W. B., *Roesleria pallida* Sacc. Ann. Botany **30**:407–414. *figs. 11*. 1916.